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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,184	04/23/2001	John Anthony Lucas	8257.15USWO	6598
23552	7590	07/28/2005	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			HERTZOG, ARDITH E	
			ART UNIT	PAPER NUMBER
			1754	

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/786,184

Applicant(s)

LUCAS ET AL.

Examiner

Ardith E. Hertzog

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 and 40-68 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8, 40-42, 50-61, 65, 67 and 68 is/are allowed.
- 6) ☒ Claim(s) 9-18, 43-49, 62-64 and 66 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-18 and 40-68 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. This action is in response to applicant's "Amendment and Response" filed April 21, 2005. Claims 1-18 and 40-68, per said amendment, are pending.
2. The objection to the abstract, as set forth in paragraph 5. of the prior Office action with mailing date October 19, 2004 (hereinafter "the 10/19/04 action"), has been **overcome** by amendment.
3. The objection to the drawings, as set forth in paragraph 7. of the 10/19/04 action, has been **overcome** by amendment. **However**, note the **new** objection to the drawings, made in response to said amendment, as set forth below.
4. The objection to the disclosure (re minor informalities), as set forth in paragraph 9. of the 10/19/04 action, has been **overcome** by amendment, **except** as set forth below. **In addition**, note the **new** minor informalities objection, made in response to said amendment, as set forth below.
5. The potential double patenting issue, as set forth in paragraph 10. of the 10/19/04 action, has been **mooted** by amendment.
6. **All** 35 U.S.C. § 112, second paragraph, rejections of the claims, as set forth in paragraphs 15.-16. of the 10/19/04 action, have been **overcome** by amendment. **However**, note the **new** 35 U.S.C. § 112, second paragraph, rejections, made in response to said amendment, as set forth below.

7. The 35 U.S.C. § 102(b) rejection of claims 9, 14 and 15 as being anticipated by Fritz et al. (US 3,918,373), as set forth in paragraph 18. of the 10/19/04 action, has been **overcome** by amendment. In particular, although Fritz et al. Figure 1 teaches the use of “cooler 17”, this element cannot be considered to read on the “quenching module” now **required** by instant claim 9, since, absent further details re Fritz et al. “cooler 17” (see corresponding Fig.1 description in sentence bridging cols. 1-2), it cannot be determined if it would function “for **rapid** quenching of... offgases to below 200°C...” (emphasis added), as **further** required by instant claim 9. ***It is noted for the record that the terminology “rapid quenching” is being interpreted as quenching “within less than 750ms”, in accordance with the corresponding description/ definition given in applicant’s specification (see p. 13, line 17).***

8. The 35 U.S.C. § 103(a) rejection of claims 1-18, 28 and 39 as being unpatentable over Brashears et al. (US 5,164,158) in view of EP 0 155 022, as set forth in paragraphs 20.-21 of the 10/19/04 action, has been **overcome** by amendment. In particular, it is **agreed** that “Brashears et al. does not show any apparent teaching that the offgases can be quenched rapidly to the recited temperature” (see remarks accompanying amendment at p. 15, last two lines), whereas **all** of applicant’s process and apparatus claims now **require**, respectively, such “rapidly quenched” step and “a quenching module” capable of performing same. **Moreover**, the remaining prior art of record (including the previously applied EP 0 155 022), fails to teach or to have suggested any such modification to the soil remediation process/apparatus of Brashears et al.

***Drawings***

9. Replacement Figure 1 is objected to, per the enclosed PTO-948.

10. **Corrected drawing sheets in compliance with 37 CFR § 1.121(d) are required in reply to the Office action to avoid abandonment of the application.**

Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended”. If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR § 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. **Any objection to the drawings will not be held in abeyance.**

***Minor Informalities***

11. The disclosure is objected to, because of the following minor informalities:

- a. In claim 15, the last line, it is respectfully submitted that “exchangers” lacks **clear** antecedent basis, in that the rest of the claim still recites a broader term—now, “heat exchange configuration”. Inserting “combustion air and

contaminants heat exchangers which include" at line 2, after "configuration",  
would be one means of overcoming this aspect of this objection.

b. New claim 58 ends with a comma instead of period.

Appropriate correction is required.

***Claim Rejections - 35 U.S.C. § 112***

12. The following is a quotation of the first paragraph of 35 U.S.C. § 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

13. Claims 43 and 47 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. It is respectfully submitted that these claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. This is a **new matter** rejection. The originally filed disclosure has been carefully re-reviewed, taking into consideration applicant's statement that the new claims are supported by "page 9, lines 3-15," and "page 11, lines 5-27" (see remarks accompanying amendment at p. 14, paragraph 7), but it is still not seen where basis for "a small proportion of the preheated combustion air bypasses said quenching to provide reheating of the quenched offgases", per new claims 43 and 47—respectively dependent upon claims 1 and 9—may be found. In particular, while applicant **does** discuss allowing "a small bleed of hot off-gas (about 10%, depending on contamination levels) to bypass the scrubber on line

63 [of Figure 1] to provide sufficient reheating of the scrubbed gas stream in the stack to prevent drooping or visible fumes" (see p. 13, lines 9-14), this discussion is directed towards applicant's "**high** chlorine or PCB containing soils" (emphasis added) embodiment (see p. 13, second full paragraph as a whole), whereas **all** claims are now considered directed towards applicant's "gases of **intermediate** chlorine compound content" (emphasis added) embodiment (see p. 13, third full paragraph as a whole). That is, basis for the "rapidly quenched" step and "a quenching module" capable of performing same, as now required by **all** of applicant's process and apparatus claims, is only found in the discussion of applicant's "gases of **intermediate** chlorine compound content" (emphasis added) embodiment (see again p. 13, third full paragraph as a whole). In other words, although Figure 1 "scrubber section 62" is disclosed as being used for quenching, there appears to be no basis in the originally filed disclosure that this component may be used for the "rapidly quenched" step of claim 1 (upon which claim 43 depends), i.e., functional for "rapid quenching of... offgases to below 200°C", as recited in claim 9 (upon which claim 47 depends). Clarification and/or appropriate correction is required. ***Lastly, it is noted for the record that the terminology "small proportion" is being interpreted as "about 10%", in accordance with the corresponding description/definition of "small bleed" given in applicant's specification (see p. 13, line 10).***

14. The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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15. Claims 9-18, 44-49 and 66 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Said claims are considered vague, indefinite, and/or confusing, due to an antecedent basis problem in claim 9 (upon which claims 10-18, 44-49 and 66 ultimately depend). At the end of the "heat exchange configuration" clause, "means" should be deleted. Appropriate correction is required.

16. Claims 62-64 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Said claims are considered vague, indefinite, and/or confusing, due to the word "all" in the preamble (apparently a typographical error in the most recent amendment). Evidently, "all" should be replaced with "according" in each of these claims. Appropriate correction is required.

#### ***Allowable Subject Matter***

17. Claims 1-8, 40-42, 50-61, 65, 67 and 68 are considered allowable over the prior art of record.

18. Claims 9-18, 44-46, 48, 49, 62-64 and 66 would be allowable ***if rewritten to overcome the 35 U.S.C. § 112, second paragraph, rejection(s), as set forth above.***

19. The following is a statement of reasons for the indication of allowable subject matter: Brashears et al. (US 5,164,158) and EP 0 155 022 are still considered the closest prior art of record. However, as already discussed, "Brashears et al. does not



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show any apparent teaching that the offgases can be quenched rapidly to the recited temperature" (see again remarks accompanying amendment at p. 15, last two lines), whereas **all** of applicant's process and apparatus claims now **require**, respectively, such "rapidly quenched" step and "a quenching module" capable of performing same. **Furthermore**, as already discussed, the remaining prior art of record (including the previously applied EP 0 155 022), fails to teach or to have suggested any such modification to the soil remediation process/apparatus of Brashears et al. **Accordingly**, all of applicant's claims, with the exception of new matter claims 43 and 47, are/would be considered allowable over the prior art of record, per paragraphs 17.-18. above.

### ***Conclusion***

20. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR § 1.136(a).

21. **A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR § 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.**

22. Any inquiry concerning this communication or any earlier communications from the examiner should be directed to Ardith E. Hertzog at telephone number (571) 272-

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1347. The examiner can normally be reached on Monday through Friday (from about 8:00 a.m. - 4:00 p.m.).

23. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman, can be reached at (571) 272-1358. The central fax number for all communications is now 571-273-8300.

24. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. For any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
AEH

July 24, 2005

  
STANLEY S. SILVERMAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700